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R. Deader

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David M. Pepper) Group Art No.: 2878
Application No: 09/808,472) Examiner: Christopher W. Glass
Filed: 3/14/2001) Re: RESPONSE
For: "Coherent Detection Receiver Using) Our Ref: B-3807 617493
A Time-Delay Interferometer...") Date: March 20, 2003

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

This paper is filed in response to the official action dated January 15, 2003.

Please amend claims 16 and 20 to read as follows. (In Appendix A the Examiner will find a marked copy of claims 16 and 20 showing the proposed changes). These amendments do not affect the scopes of the claims:

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16. The optical apparatus of claim 15 the two exiting optical components have the same wavefronts and propagating directions as the first and second components and being in quadrature.

20. A method for detecting sonic vibrations in a test material having a test surface comprising:

(a) generating a beam of light having a wavelength;
(b) splitting said beam into a first beam and a second beam;
(c) directing said first beam onto said test surface to be scattered by said test surface with data having a minimum signal frequency component;
(d) delaying the second beam by a period of time which is greater than an inverse of the minimum signal frequency component;
(e) directing at least a portion of said scattered first beam and the delayed second beam on an adaptive beam combiner, the adaptive beam combiner emitting two

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